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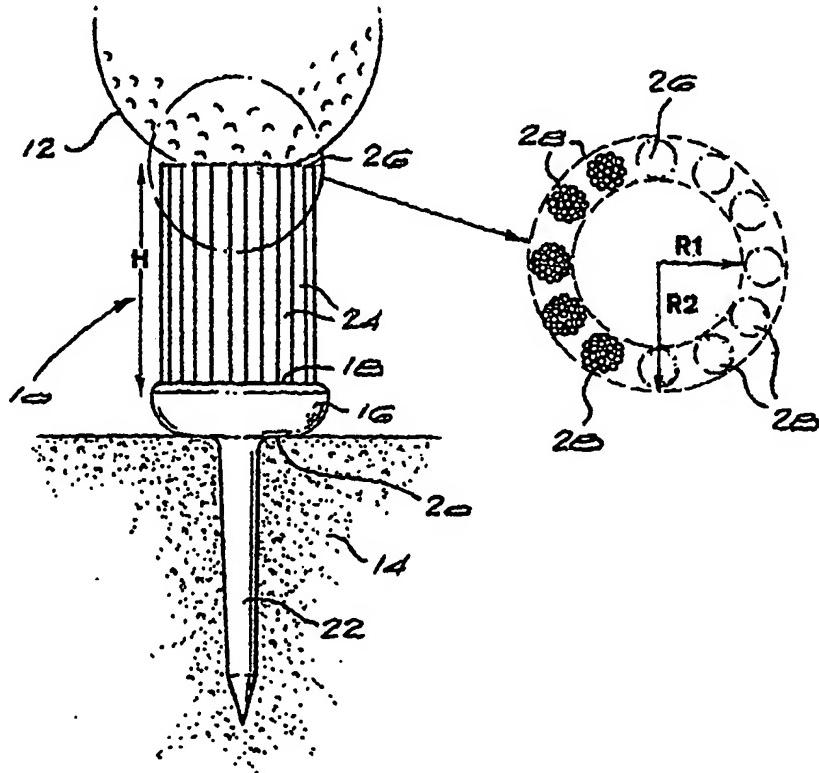
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(21) International Application Number: PCT/IB00/00104 (22) International Filing Date: 2 February 2000 (02.02.00) (30) Priority Data: 99/0825 3 February 1999 (03.02.99) ZA (71)(72) Applicant and Inventor: CROUSE, Jason, Lee [ZA/ZA]; 50 Hannaben Street, Linksfield Ridge, 2198 Johannesburg (ZA). (74) Agents: GILSON, David, Grant et al.; Spoor and Fisher, Rochester Place, 173 Rivonia Road, Morningside, Sandton, P.O. Box 41312, 2024 Craighall (ZA).	(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
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(54) Title: GOLF TEE

(57) Abstract

This invention relates to a golf tee (10) for supporting a golf ball (12) on a ground surface (14). The golf tee (10) includes a base (16) which supports a number of bristles (24) which in turn support the golf ball (12). The bristles (24) are arranged to form an annular support surface (26) which supports the golf ball (12). A shaft (22), which is arranged to be pushed into the ground surface (14), extends from the base (16). The bristles (24) of the golf tee (10) are not broken when the golf ball (12), supported at the golf tee (10), is hit by the face of a golf club. Further, the bristles (24) do not damage the face of the golf club and provide little deflection to the face of the golf club when a golf ball (12) is hit.



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GOLF TEE

BACKGROUND OF THE INVENTION

This invention relates to a device, in particular a golf tee, for supporting an object such as a golf ball on a ground surface such as the surface of a teeing mound.

Golf tees are usually made from wooden or plastics materials. Although these materials are softer than the metal club face of a golf club, in use the tees do sometimes damage the club face. In use the tee is also often broken and broken tees tend to litter golf courses and cause damage to mower blades on the golf course.

South African patent no. 87/5576 discloses a golf tee which is made up of two parts. The first part defines a rigid shaft for the tee and the second part defines a cup for the tee. The cup, which is arranged to support a golf ball, is made from a yieldable material and is designed to absorb impact when it is struck by the face of a golf club. The object of this is to stop the tee from breaking and also to cause less damage to the club face. However, in practice, this type of tee does break and also causes damage to the club face especially if the club face strikes the rigid shaft.

It is an object of this invention to provide a golf tee that addresses these problems.

SUMMARY OF THE INVENTION

According to the invention there is provided a device for supporting a ball, such as a golf ball, on a ground surface, such as a teeing mound, the device including:

a base;

engagement means for engaging the base to the ground surface; and

at least one elongated resilient support member, extending from the base, which defines a support surface for supporting the ball.

Advantageously, the device includes a plurality of support members, in form of bristles, which extend from an operatively upper face on the base and which define the support surface.

The bristles may be from 30 to 10mm in length, preferably the bristles are either 27mm, 22mm or 15mm in length.

Advantageously, the bristles are arranged on the upper face to define an annular support surface for supporting the ball.

Typically, the annular support surface has an inside radius of 5mm and an outside radius of 7,5mm.

Advantageously, the bristles are arranged in clusters, typically from 8 to 15 clusters, with from 10 to 25 bristles per cluster.

The bristles are preferably made from nylon and have a thickness of 0,4mm.

Typically, the upper face of the base is circular in shape and has a width of about 18mm.

The engagement means is typically a pointed shaft which extends from an operatively lower face on the base and which is arranged to be pushed into the ground surface.

Advantageously, the shaft is formed integrally with the base.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a side view of a golf tee according to the invention supporting a golf ball;

Figure 2 is a cross-sectional side view of the golf tee of Figure 1, with the support bristles removed; and

Figure 3 is a top view of the golf tee of Figure 1, with the support bristles removed.

DETAILED DESCRIPTION OF THE INVENTION

Referring to Figure 1, a golf tee according to the invention, for supporting a golf ball 12 on a ground surface 14, is shown generally by the numeral 10. The golf tee 10 includes a base 16 defining an operatively upper face 18 and an operatively lower face 20. A pointed shaft 22 extends from the lower face 20 and support bristles 24 which are elongate and resilient extend from the upper face 18. The support bristles 24 define an annular upper support surface 26 which supports the golf ball 12. The annular support surface 26 has an inner radius R_1 of 5mm and an outer radius R_2 of 7,5mm. The support bristles 24 are made of nylon and have a thickness of 0,4mm. The support bristles 24 are arranged in clusters 28 of about twenty bristles per cluster. There are twelve clusters 28 of bristles 24.

Referring to Figure 2, the base 16 is formed integrally with the shaft 22 and is typically moulded from a hard plastics material such as acrylonitrile butadine styrene (ABS plastic). The length L of the shaft 22 depends on the ground surface on which the golf tee is to be used. Typically, the shaft 22 has a length of about 30mm.

Referring now also to Figure 3, the upper face 18 of the base 16 is circular in shape and has a width W of 18mm. A series of holes 30, (in this case twelve holes), are formed in the upper face 18. The twelve holes are arranged in a circular formation. About twenty bristles are inserted into each hole 30, to form the clusters 28 shown in Figure 1.

In use, the shaft 22 of the golf tee 10 is inserted into a ground surface such as a tee mound until the lower face 20 of the base 16 comes into contact with the ground surface. A golf ball 12 is placed on top of the support surface 26 defined by the bristles 24 and the golfer then hits the ball 12 off the golf tee with the club face of a golf club (not shown).

The advantage of the golf tee 10 according to the invention is that when the ball is hit, the face of the golf club only comes into contact with and passes through the soft resilient bristles 24 of the tee. The soft resilient bristles 24 do not damage the club face and provide very little resistance or deflection to the club face when the golf ball is hit. Another advantage is that (unless the club face hits the base 16) the tee is not broken when a ball is hit. This saves golf tees and there is less littering of a golf course with broken golf tees.

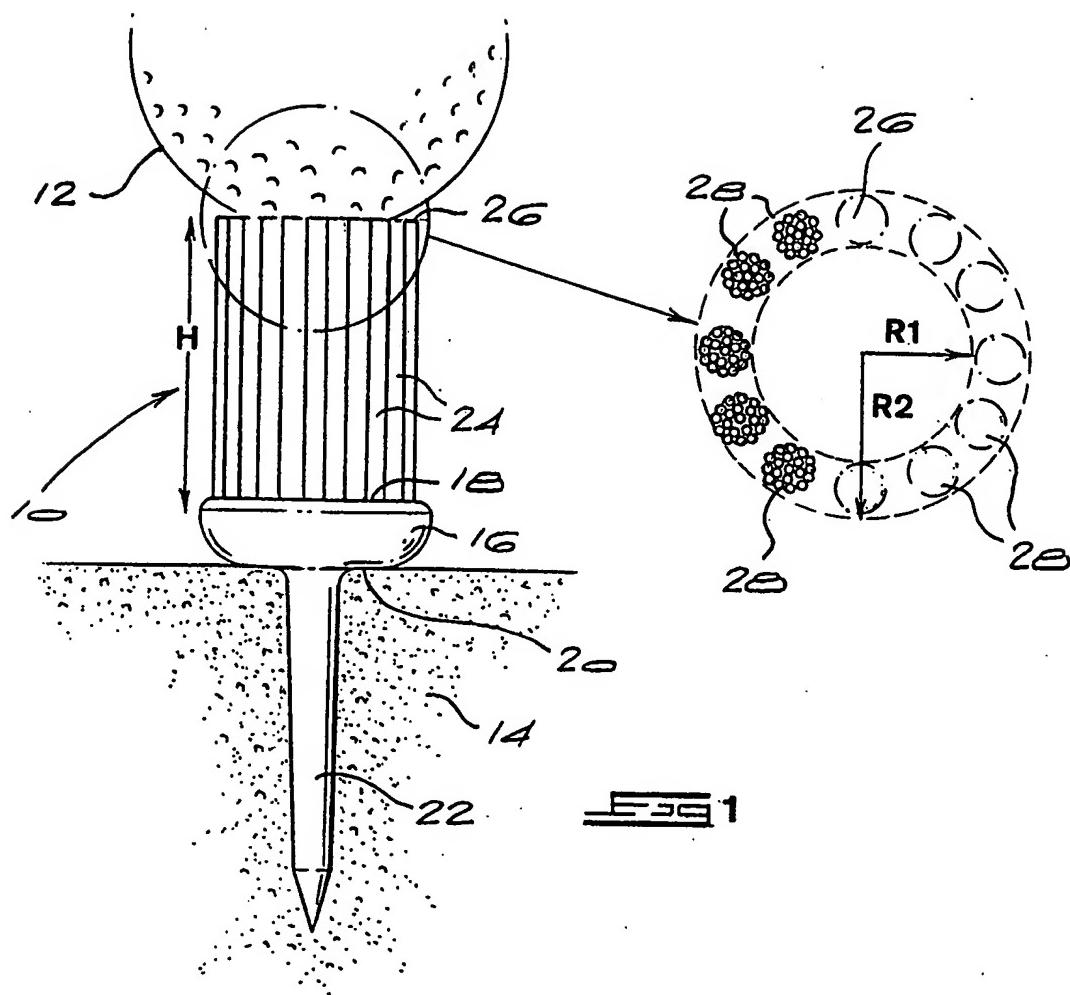
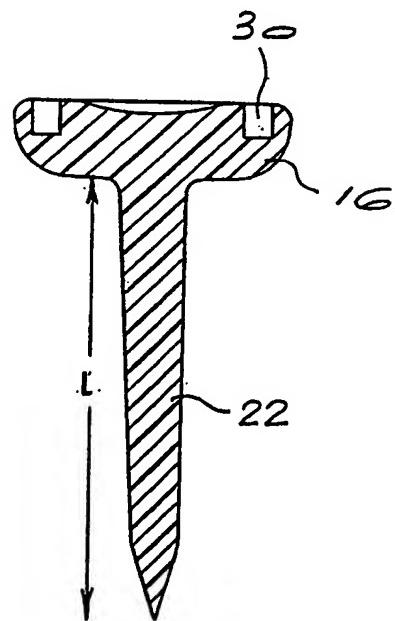
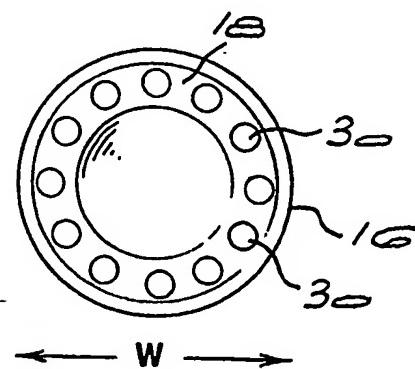
Referring to Figure 1, the height H of the support bristles 24 may vary from 30mm to 10mm, depending on the golf club used and the preference of the golfer. In practice, the golf tee 10 according to the invention is provided with support bristles 24 with heights H of 27mm, 22mm or 15mm. A golfer can then select the tee height that he or she wishes to use.

Although this invention has been described for supporting golf balls, it is envisaged that it may be used for supporting other types of balls that require a support from which they are hit or kicked.

CLAIMS

1. A device for supporting a ball on a ground surface, the device including:
 - a base;
 - engagement means for engaging the base to the ground surface; and
 - at least one elongated resilient support member, extending from the base, which defines a support surface for supporting the ball.
2. A device according to claim 1 which includes a plurality of support members, in form of bristles, which extend from an operatively upper face on the base and which define the support surface.
3. A device according to claim 2 wherein the bristles are arranged to define an annular support surface for supporting the ball.
4. A golf tee for supporting a golf ball on a ground surface, the golf tee including:
 - a base;
 - engagement means for engaging the base to the ground surface; and
 - at least one elongated resilient support member, extending from the base, which defines a support surface for supporting the ball.
5. A golf tee according to claim 4 including a plurality of support members, in form of bristles, which extend from an operatively upper face on the base and which define the support surface.

6. A golf tee according to claim 5 wherein the bristles are arranged to define an annular support surface for supporting the ball.
7. A golf tee according to claim 6 wherein the annular support surface has an inside radius of 5mm and an outside radius of 7,5mm.
8. A golf tee according to any one of claims 5 to 7 wherein the bristles are from 30mm to 10mm in length.
9. A golf tee according to claim 8 wherein the bristles are 27mm, 22mm or 15mm in length.
10. A golf tee according to any one of claims 5 to 9 wherein the bristles are arranged in clusters with from 10 to 25 bristles per cluster.
11. A golf tee according to any one of claims 5 to 10 wherein the bristles are nylon bristles and have a thickness of 0,4mm.
12. A golf tee according to any one of claims 4 to 11 wherein the upper face of the base is circular in shape and has a width of about 20mm.
13. A golf tee according to any one of claims 4 to 12 wherein the engagement means is a pointed shaft which extends from an operatively lower face on the base and which is arranged to be pushed into the ground surface.
14. A golf tee according to claim 13 wherein the shaft is formed integrally with the base.

1
1FIG 2FIG 3

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 00/00104

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A63B57/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A63B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 258 161 A (ST JOHN ET AL.) 3 February 1993 (1993-02-03) the whole document ---	1-14
X	WO 95 07118 A (SVENSSON) 16 March 1995 (1995-03-16)	1-12
A	page 4, paragraph 2 -page 5, last paragraph; figures 1,5,6 ---	13,14
X	DE 90 05 261 U (TOPIARZ) 12 July 1990 (1990-07-12) the whole document ---	1-11,13, 14 12
A	GB 236 132 A (LLOYD) 23 July 1925 (1925-07-23) page 1, line 94 -page 2, line 31; figures 4-6 ---	1-9,13, 14 12
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Patent family members are listed in annex.

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Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 016, no. 509 (C-0997), 21 October 1992 (1992-10-21) & JP 04 189374 A (TSUGUYASU SAKAMOTO), 7 July 1992 (1992-07-07) abstract -----	1-9, 12, 13

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